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Approved For Release 2002/07/22: CIA-RDP80-00810A002300830004-1

SECURITY INFORMATION CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

CD NO.

REPORT NO.

COUNTRY	East Germany	DATE DISTR. 13 November 1953
Subje c t	Information on Elektrochemisches Kombinat Bitterfeld	NO. OF PAGES 9
PLACE ACQUIRED	25X1A	NO. OF ENCLS. CLISTED BELOW: 25X1A
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SOURCE

- 1. The Electro-Chemical Combine in Pitterfeld was founded by the Griessheim-Electron Co and until the end of World War II belonged to the IG-Farten Concerr. The Electro-Chemical Combine consists of a South Plant (Werk Sued) west of Fitterfeld, and a North Plant, south of Greppin and about one kilometer of the South Plant. To the morth, the North Plant borders on the area of the VEL Dyestuffs Plant Wolfen, which extends from Greppin as far as Wolfen. The AGFA Film works of the SAG Fotoplenka is located west of Wolfen. Rich brown coal mines, which are an important source of raw materials and power for the plants mentioned are located in the vicinity of Pitterfeld-Wolfen. Other main sources of raw materials are the mineral potash and magnesium salt deposits near Starsfurt, and limestone and gypsum quarries in the Harz Mts. Other basic materials such as sulphur, manganese ores, aluminum oxide etc. must be imported. With regard to basic materials and intermediate products there is close cooperation among the chemical works in the Fitterfeld-Wolfen area and between this group of plants and the chemical works in Leuna and Schkopau. 1
- 2. After the German surrender in 1945, the chemical plants in Fitterfeld were forbidden to continue working. However, when the Soviets arrivel, they ordered that the works resure their production, that all the machinery and apparatus which had suffered war damage the repaired without delay, and that everything be put in tip-top shape.
- 3. In March 1946, the Soviets ordered the plant to be dismantled. Within three days, 30,000 workers arrived for the dismantling of machinery and installations. Departments dismantled—were the mercury method alkali electrolysis,—the foundry for ferro alloys and special products, a large part of the installations producing wolframic acid, molybdenum, formic acid, calcium formate, and the synthetic jewels—department pheside the entire oxygen department at the North Plant; the departments producing potassium bichromate (except for a few units), potassium permanganate, and the potash processing department, at the South Plant. The high-pressure power station at Thalheim near Fitterfeld, which was constructed during the war for the Electro-Chemical Combine was also completely dismantled. In the plastics department, the nickel-plated polymerization autoclaves and a number of apparatus used for the processing of polyvinyl chloride were dismantled. Relatively little dismantling was done in the organic chemistry departments because the equipment was obselescent.

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Dismantled were parts of the benzol chloride and of the tricrosyl phosphalis plants. Nost heavily affected by dismantling were the light metal department including the scrap processing plant, and the 30,000 and 15,000-ton forging presses. Aluminum Plant II was also completely dismantled. Machinery dismantled represented about 65 percent of the total machinery available at that tire.

- A. In 1946, the litterfeld plant was turned over to the administration of the Soviet-owned enterprises in Germany. The remaining value of the plant was estimated at about 80 million Eastmarks, because the directives laid down by the Soviets for an assessment of assets were very rigid. Generally, in Soviets left a fraction of the machinery available in each of the plants dismentled by them, so it was possible to continue production on a courted scale. Plans for the reconstruction of the Electro-Chemical Combine were drawn up already during the process of dismantling which was completed within about eight weeks.
- he production departments of Plants North and South, which are under con The administration, are subdivided into seven Main Departments. Each of them is headed by a departmental chief who is subordinate to the Chief Chemist. flost of the individual plants are managed by chemists who are assisted by mechanical engineers. Several engineers are subordinate to a Pain Engine To and the main engineers are subordinate to the Chief Engineer. The Chief Chemist and Chief Engineer cooperate closely with one another. Disputes the Chief them are settled by the Chief Director or his deputy, the Chief Cherist, he Commercial Director controls the Procurement and Sales Department, the frame-Zones Fureau and is responsible for all traffic matters. The Chief Accountables, who is directly subordinate to the Chief Director of the Works, controls the Cost-Accounting Department, the Fook-Keeping Department, and the Cash department. The Personnel Chief and the Social Welfare Director are in charge of pursonnel and welfare matters respectively. Toth of them are more or less political functionaries who closely cooperate with the SED factory organization and the espresentatives of the trades unions. They have to be CED members and in wes discharge of their responsibilities follow the directives of the SED. The Research and Develorment Director is in charge of all research activities. At the Electro-Cherical Combine. With a view to improving the quality of one goods produced at the Works, a Bureau for Technical Inspections was 63th 5113660 in 1950. This bureau checks on the quality of all incoming and outgoing products and reports all defects to the plant management. The luero fuer technish a Arteltsmormung (Works Standardization Fureau)(TAN) is concerned with all problems of standardization, piece work, the payment of workers, and the dosposition of the work forces of the individual shop departments. The TAN bursaid hes a decisive say in the fixing of the budget for wages and salaries. It : Chief Director is assisted in his work by the Technical Management Secretariat which, in the course of the last years, developed more and more into a planning department. In this bureau, all plans are drawn up and statistical records concerning the output of the works are kept there. Moreover, the smooth slow of production is controlled by this tureau, and all disturbances are reported to the plant management.
- 6. The economic planning of the enterprise is based on the capacity of the individual departments, the possibility of increasing production, a detailed enalysis of the market situation, availability of raw materials and other

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auxiliary means of production, and the work force required. Production plans are drawn up by the Chief Pirector with the help of departmental chiefs concerned; difference is made letween technical and financial plansing

- 7. The development of the output of the Combine reflects the progress of its rehabilitation. While, in 1947, commodities to the total value of 109 million Eastmarks were produced, the value of this production rose to 381 million Eastmarks in 1949, and exceeded the 200 million mark in 1950. The value of the output has continued to rise after 1950. Special attention is devoted in this connection to the question of prime costs, cost prices, and consideration of raw materials, energy and auxiliary materials. The individual production departments are assigned plan figures (Planzahlen) for prime costs and the consumption of materials, the observance of which is checked every month. This set-up ind to a noticeable decrease in the consumption of materials and energy. In special conferences held every three months, the Chief Firector of the Combine laboras the work force of the plant of the result of the economy measures taken; criticism is voiced publicly, and action is taken against those responsible for failures. All efforts are made to prevent the total value of cutput from lagging tehind plan figures.
- 8. Work productivity at the Combine also developed favorably. It is determined every month and is expected to rise continuously. With regard to the low malling price of basic chemical products its money value is not very high. However, it increased from 900 Mastmarks per capits and month in 1947 to approximately 2,000 Eastmarks in 1950. Work productivity has a decisive bearing on the fund available for wages and salaries. If, for instance, the value of the commodities to be produced in a given month has been fixed at 13 rillion Eastmarks and the per capita production quota per month stands at 1,800 Eastmarks, no more than 10,000 workers (the number resulting from the division of 18,000,000 by 1,800) may be assigned to work in the production departments. The monthly wages fund is also calculated on this basis. If the production plan is not fulfilled, workers must be discharged.
- 10. Generally, workers are . paid by the hour; the wage rate is determined by the type of job performed. But most workers are also paid on a performence basis or receive performance bonuses. Performance wages are paid either to individuals or to groups of workers. Their rate depends on a careful determination of work norms. The work norm is calculated on the basis of the average performance of an able-bodied worker suited for the specific type of job. If norms are exceeded, the workers involved are paid a proportional compensation; it the norm is reached but not exceeded, a bonus amounting to 15 percent of basic wage is paid.
- individually or jointly with other shops. The most important production departments are those for inorganic products, organic products, the plastics department, the light metals department, and the departments for nitrogenous products and heavy metals. The Combine has a power plant of its own. The situation in Fitter-feld is still fluid. Many of the departments are continuously being enlarged and the production programs are very flexible, requiring frequent changes in the set-up of the individual shops.
- 12. In the Inorganic Department, the products of alkali electrolysis, i.e. caustic soda, caustic potash, and chlorine gas, have always formed the basis for the main production of the Combine. In 1645 already, the production of caustic soda was pushed. This branch of production continues to begiven priority. Caustic soda is delivered chiefly to rayon and cellulose yarn plants. Since

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the modern electrolyser outfit of the North Plant which was equipped with nercury calls was dismentled in 1946, only two obsolescent Signer-Filli m type electrolyzers remained available at the Nord Plant and another such electrolyzer with about 70 boths at the South Plant, Another mercury-are electrolyzer was used at the South Plant for the production of both causius soda and caustic potash. Another mercury-type electrolyzes fitted with of was installed after many difficulties had been overcome. (* 11 relieved that the Combine has at present a annual capacity of at least 60,000 tons of caustic soda. Fesides industrial caustic soda and potent . : the form of flakes, 1,200 to 1,600 tons of special types of caustic soils and potesh with very low contents of chlorine are produced annually for export to the USSR. Sodium metal, of which six tons are produced per min's at an experimental plant, is exclusively delivered to the Suma rutter please st Schkopan. The planned increase of this production was prevented by a lack of suitable baths. The department for the production of sodium chipmage and potassium chlorate experienced great difficulties in the last years, because the magnetite electrodes in use proved unsuitable. It was therefore planned to have them replaced by graphite electrodes. Nevertheless the mappe of this department increased considerably. Sodium chlorate and potassium are delivered to match factories and explosives plants, but they are also possias weed killers, perticularly by the East German Reilroads. Potassium an orate is allegedly shipped in large quantities to China. In 1946, the Sovieta ordered that facilities for the production of calcium metal te installad in one workshop of the department. The metal produced was to have a purity of 1/10,000 \$. The plant performs electrolysis of chlorine-treated limentame in a series of graphite-lined baths, each of them measuring 100x50x50 cm. A let are connected in series, the voltage of each subsequent bath being by 30 ? lower than that in the preceding one. The calcium metal obtained in this way may still have an impurity of up to 1%. In order to further purify it, in is alloyed with copper in a separate building and then distilled in a limb vacuum. All impurities are thus absorbed by the copper and a mearly of solutely pure product is obtained. In 1949, shout 300 tons of calcium metal we a produced, half of which consisted of distilled calcium metal. The production was suspended in 1950; however, the plant is being maintained in working order. Other potassium compounds produced at litterfeld are potassium bichromete and potassium permanganate. Ty utilizing chromium oxide, a total of 3,000 tons of potassium bichromate is annually produced, mainly for hather tarning purposes. Fure chromium exide is manufactured for the dyectuffs industry. After 10 additional electrolytic cells had been installed, the Combine had an annual capacity of about 2,000 tons of potassium permangulate in 1951. Silirion and Trosilon, washing and industrial purification agents, are produced from caustic lyes at the North Plant. Chlorine gas obtained as a byproduct of the electrolysis of alkali is put to manifold west. It is used for various inorganic and organic compounds, and in a condensed form it is stipped in large quantities to Sweden, Poland, and Czechoslovakia. Hydrochloric scid is produced by burning chlorine with an admixture of hydrogen with the help of generator gas. Hydrochloric acid is also produced, as a typroduct of the gradualists of tricresy's phosphate. The hydrochloric acid plants were never utilized to capacity refere the war, so it was possible to increase the production of this substance. A total of 80,000 tons are now produced per year. Nevertheless, there were often difficulties in meeting the requirements of the Wismut A.G. i. Ass By treating Thuringian berytes with chlorine, barium chloride is obtained. substance used by East Germany, Feland and Czechoslovakia as vermicide, for the production of other harium compounds, as well as an agent for steel hardening. In spite of these manifold possibilities of utilization, not all of the chlorine obtained in the last years could be marketed.

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In a phosphorus oven built in 1900 but modernized in the mean time, about 1,500 tons of yellow phosphorus are produced per year. Of this quantity, 1.000 tons are sold on the market. The basis for this production is possed on apatite concentrate delivered from the Kola Peninsula. This is pre-treated in a phosphorus agglomerating plant before being processed in the oven. Minor quantities of red phosphor are also produced. Phosphorus oxychlorude and phosphorus trichloride are obtained in an auxiliary plant. These substances are used by coal tar dyes factories, the glass industry, and laboratories. In the spring of1950, a plant for the production of titablus dioxide was put into operation. This plant has a monthly output of about 30 tons of pure titanium dioxide and of about 40 tons of a lower grade titanian containing iron oxide; the impure titanium dioxide is used for welding electrodes. In the purification process elemental sulfur in lump form is obtained and most of it is marketed. One of the major products of the Curbine are graphite electrodes. In several ovens pre-pressed mixtures of anthrivation and coke are transformed into so-called electric graphite through electric molecular transformation. This graphite is used for both electrodes required in the steel production and for various units of the Siemens-Billitzer calls of the alkali electrolysis. The production process extends over two and a half days. At the end of the war, 600 tons of graphite electrodes could be produced in Fitterfeld per month; in 1950, when 15 graphite ovens were is operation, the monthly capacity rose to about 1,200 tons. At present, a total of 25 ovens is, allegedly, in operation.

The plant for the manufacture of synthetic precious stones had been rewrith by 42 and the old capacity of the works was reached at that time. For a long time, synthetic precious stones were delivered to the USSR. Since these deliveries were stopped, the stones have been cut at the works and sold for the manufacture of bearings for time-places and measuring instruments. For adding generator gas obtained from brown coal briquettes and used for factory of quirements, minor quantities of oxygen and mitrogen are produced at a birder plant. The Inorganic Department of the Electro-Chemical Combine produces some additional substances such as toothpaste and acidgas well as header resistant cements, often only on special order.

Major products produced at the Organic Department include oxalic acid, tricresyl and triphenyl phosphate, benzoic acid, benzotrichloride, formit acid, calcium formiate, benzol chloride, carbon tetrachloride and some other organic substances used for crop dusting. Oxalic acid is produced from style and sold to enterprises which manufacture photographic developers, disinfectants and cleaning agents as well as tanning substances. Tricresyl and triphenyl phosphates are obtained from cresol and phenol respectively, which are supplied by the Leuna Chemical Combine. These substances are used as softening agents for plastics and at the AGFA Film Plant of the SAG Fotoplenka in Wolfen. Fenzoic acid is produced as a preserving agent from toluck via benzotrick boride while carbon tetrachloride is used as a solvent and produced from carbon disulfide delivered by the Leuna Works. Other insecticides produced include Gesarol obtained from Polish benzol via benzol chloride as well as the socialled Hexa and Garma-products. Chloral and chloral hydrate is produced from altohol.

The installations for the production of formic acid were completely dismutiad. However, a new such installation is said to have been built at the North Flont. This installation, allegedly, also produces calcium formiate. In 1951, plans were being considered for a production of methylene chloride and of behaves

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Bitterfeld; however, no detailed information was available to source as to its equipment, except for the fact that orders had been placed for the delivery of three transformers of 30.000 kVA each. The aluminum produced is sold in ingots or lumps; pressed semi-finished products, eastings and other finished products are also marketed. Since 1951, magnesium has also been produced at the light-metal department, a new plant erected in the corthern portion of the North Plant.

- 16. Prior to the end of World War II, the heavy metals department included some installations for the production of ferro-molybdenum and wolframic acid at the North Plant. Minor quantities of zirconium were also produced. The installations were partly dismantled, partly deactivated. Production has been resumed on a limited scale. Produced are molybdenum metals, wolframe acid, zirconium alloys, barium metal, manganese metal and some ferroalitys. The desired enlargement of the heavy metals department, particularly the expansion of the production of molybdenum and wolfram, proved impossible because of the unsolved raw materials problem. Among the commodities which sell very prefitably are welding-on alloys and special alloy electrodes. The same applies to cerium metals and various white metal slloys produced in suzuliary plants.
- 17. Nitrogenous products are produced on the basis of ammonia delivered by the Leuna works. Ammonia yields nitric acid, most of which is further processed into natrate of ammonium and nitrate of lime (Kelkamnonsalpeter). Most of the nitrate of ammonium is used for the production of explosives at the emplosives plants at Gnaschwitz and Schoenebeck/Elbe. Sodium nitrite and nitrate by site also produced. In September 1952, a portion of the nitric acid plant was destroyed by an explosion, allegedly caused by sabotage. The damage was quickly repaired.
- 18. A number of byproducts are also obtained in Bitterfeld, eg. seasoning agents and soup cubes. New production methods are being tested in some laboratories. Among others, experiments are said to have been made with hydrazine and hydrazine hydrate as well as with sodium cyanide, All the experiments made at Bitterfeld are exclusively connected with factory requirements. After the war, all laboratories where research work was conducted were subordinated to a central research institute, which comprises special departments for organic and inorganic chlorides, light metals and plastics. The basic problem for this research work has always been to find a means of utilizing the large quantities of chlorine obtained from the electrolysis of alkalies. The most important result obtained was a procedure of producing a rew alumina by using hydrochion. acid as a means of dissolution. This raw alumina may eventually be used for the production of alumina, the basic substance of aluminum. The properties of various organic chlorine compounds are also being investigated. Much autention is devoted to the production of insectleides. The plastics laboratory as interested in the production of a heat-resistant . Igelit. Other research work conducted concerned the production of a phosphorus soluble after admixture of citrates (citratloeslicher Phosphor) to be used for fertilizers.
- 19. The Electro-Chemical Combine in Bitterfeld has its own power supply. The power station in Bitterfeld was built in conjunction with the establishment of large chemical plants in this area. Work on it was started in 1915, but it did we reach its full capacity before 1937. Boiler houses 1 through 3 were built between 1915 to 1917. They are equipped with 46 boilers which have a rated pressure of 20 atmospheres each and an output of 7.5 t/h of steam each. All of these

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are Steammueller sloping-tube space boilers , The fourth tolem house was built in 1928/ 1929. It was equipped with 8 boilers delivered by the firms of HANCHAG and Karlsruher Haschinenfabrik and I boiler delivered by the firm of Steinmueller, All these boilers are equipped with pechanics) trough-grate fire boxes delivered by the firm of Fraenkel & Viebahn. They have a rated pressure of 21 atmospheres each and furnish steam at a pressure of 20 atmospheres and a temperature of 400°C. The normal output is 25 tons of steam per boiler and hour. The one Steinmueller boiler has a capacity of 52 tens of stear per hour. Between 1934 and 1936, 10 high-pressure boilers of type Schmidt-Hartmann equipped by the Vereinigte Kesselwerke in Diesse dorf were installed in Boiler House No A. These boilers produce steam of pressure of 103 atmospheres and a temperature of 500°C. They are olso equipped with mechanical trough grates delivered by the firm of Fraenkel * Viehbahn. They have an average output of 40 t/h of steam. Before the last rentioned group of nine boilers were installed, two experimental boilers were set up, one of them a Schmidt-Hartmann boiler, and the other one a modified Benson boiler. The two boilers are still in operation. All the boilers available at the Electro-Chemical Combine burn raw brown coal produced in the neighboring brown coal mines. The coal is shipped to the factory by means of special coal cars fitted with bottom discharging facilities. Coal is stored in an elevated bin with a storage capacity of 15,000 tons of coal. This quantity represents the coal requirements of the Combine for a 36-hour period. The coal is mechanically conveyed to the boilers after being crushed in two crushing plants. On the way the ashes are transported to a deactivated open cast mine about three km distant, the flushing method is queed. The engine house of the Combine is located at a right angle to the boiler houses. The engines were set up from west to east between 1915 and 1937. Engines 1 through 12 are arranged in a row. Except for one, they are condensing engines with an inletpressure of about 18 atmospheres. Engine No 3 is a back pressure engine used for the production of a steam of five atmospheres pressure for factory requirements. The other engines available at the engine house ere arranged in two rows; in the second row are the two back-pressure engines which are fed with the steam of the 100-atmosphere steam plant, North of the engine bouse are the three distribution stations Nos 1, 2 and 5, each of them equipped with five kV switching facilities. The engine house and the switching stations are connected by 5-kV cables, most of them laid in special cable ducts. Switching station No 4 contains a 5- and a 30-kV switching plant and serves a 30-kV net of lines within the areas of the Bitterfeld-North Flant, the Dyestuff's Works, the Film Flant in Wolfen and the surrounding coal mines. Distribution stations Nos 6 and 7 are equipped with 100-kV switching plants fed by transformers installed in two distribution stations. Distribution station No 8 is a combined indoor and open air switching station. Distribution stations No 6 and 7 feed the grid system built in 1934 to 1938 between the factories in aken, Stassfurt, Buna-Schkopau, Leuna, as well as the coal mines and briquette factories at Nachterstedt and Deuben/Theissen with a view to providing an even surply of electricity. The grid was later supplemented by a 100-kV connection to the North Plant and the dyestuffs works. This grid is connected via the Susigke switching station with the grid of the electric plants and through distribution station No 8 to the power station at Ischornewitz. A third connection to this public network of power transmission via the distribution stations at Doellnitz, Schkopen and Diesken. Between the distribution stations located north of the engine house, there is the plant for iprocessing the boiler water. A water purification plant is also available west of the power station, A this plent, water obtained from the coal mines is processed for use in the boilers. South of the boiler houses are seven cooling towers used for the recooling of the condensing water of the condensers. Other installations available in the area of the power station of the Electro-Chemical Combine include a fitter's and motor vehicle repair shop, an electric and mechanical workshop, carpenter shop, painting shop, high-frequency shop, telephone shop, reter shor, an overhead-line repair shop, and a number of subsidiary buildings. The production of electric current was already inadequate in the suggest of 1950.

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hexachloride, but in late 1952, the production of these substances lad moty yet been started. In 1949/1950, special attention was devoted to the so-called Freons, derivatives of fluoro methanes predominantly used as refrigerants, but possibly also useful in the manufacture of plastics. In Fitterfeld, differential and are rade between Freon-12 (CF2C12), Freon-13 (CF3C1). Freon-14 (CF4) and Freon-22 (CFF2C1). Source did not know whether the production of these substances has been started in the meantime, he only stated that the Bitterfeld works were to cooperate closely with the fitterplant at Dohna.

- 14. Considerable efforts were made to increase the production of plastic rate risks. The liquid vinyl chloride supplied by the Buna plant in Schkopen is polymerized in rotatable autoclaves into PCU powder or Igelit. This polyminyl chloride serves as basic substance in the production of various plastics. In 1951, a new four mangie calender suitable for the pressing of all kinds of foils was put foily operation. Mainly 0.1 foils used for packing purposes were manufactured. In 1952, it was planned to set up a 3- or 4-mangle calender for the manufacture of Igelit. Floor covering. There was also great interest in the production of vinidur tubes. The number of tube machines available was to be increased from two to four or five. The tubes and pipes produced were used for roof grit are and plumbing.
 - The building of the so-called PC Department where polyvinyl chloride underwent further treatment with tetrachlorethane was dismantled in 1946. In 1948, the production of this substance was resumed in a section of the PCU Department, because there was a great depand for filter cloths and other similar fabrics by the AGFA Plant in Wolfen. Besides foils and pipes, a variety of other products was manufactured from PCU powder. as, for instance, shoen at a rate of up to 30,000 pairs per month, washable paper hangings were also produced from this powder. After the process of high-frequency waiting of Igelit was improved, the production of air cushions, bicycle tubes, without tight bags of all kinds, rain-proof garments etc. was taken up, TCU pasted and glues besides PC solutions for lac varnishes were also produced.
- 15. The aluminum department at the South Flent, which had been built during Foreit War I and was dismantled in 1946/1947, was subsequently reconstructed with an annual capacity of 16,000 tons of foundry aluminum. The newly erected of and utilizes electrolytic rectifiers instead of the transformers previously in use. The efficiency of the installation is 24 800 kWh at a voltage of 1,350 V per ton of aluminum as against 21,000 kWh in the old plant. The less of current is mainly due to the poor quality of the alumina and electrodes. After all aluminum scrap available had been processed the procurement of alumina as a with the greatest difficulties. This bottleneck was eliminated by the delivery of bauxite from Hungary and its further processing at the Lauta works. Af Dec the so-called three-stage procedure, small quantities of pure aluminum of 99.998 to 99.999 percent are produced by using molten foundry alluminum as abode. while pure aluminum is used as liquid cathode, and a fused salt as an electrolyte. Pure aluminum is now only usedfor afew special products. The processing of foundry aluminum is only done in the light metal foundry After the 30,000 and 15,000-ton form presses were dismantled, only some but extruding presses remained available. Presses available include a 6,000-ton horizontal press, a 3,000-ton vertical press and some lighter presses. In this course of 1953, former Aluminum Flant II in the southern portion of the forta Plant was to be reconstructed for an annual output of 15,000 tens. The framework of the building for this new aluminum plant was completed when source ledt

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The situation in this respect will become even more critical after the opening of the second aluminum department at the South Plant. For this reason it was planned to enlarge the capacity of the steam boiler plants The enlargement of the steam boiler installations at the North Flant was to be completed in 1952. This project involved the replacement of the END-KW back pressure turbine dismantled by the Soviets. It was the function of this turbine to reduce the steam produced from a pressure of 20 atmospheres to one of five. The replacement turbine was scheduled to be set up by 1 July 1953 and to be furnished by the turbine factory in Dresden-Neustadt, previously Brueckmer-Kanis. The enlargement of the boiler installations at the South Plant had to be delayed because of a shortage of materials. In April 1932 the scheduled annual output of 1,370 million keh was increased to 1,390 khm. In 1953, the production of electric current is to be increased to 1,420 and in 1954 to 1,435 to 1,440 kWh. Since the production of electric power would be inadequate after the establishment of a second aluminum plant, it was planned to obtain additional power from the newly founded Elbe power station. Source did not know whether the plans for the expansion of the power producing facilities of the Electro-Chemical Combine could be executed. In 1952, the output of electric current maintained at its actual levelonly by improvisation Was All the engines and boilers of the power station of the Corbine were overburdened and were liable to cause breakdowns in the power supply system et any time. Since many of the engineers and skilled workers have fled to the west, there is an acute shortage of skilled technical personnel. 4

20. From 1945 to 1947, the Electro-Chemical Combine was guarded by a Soviet military unit; subsequently a VP unit moved to the plant. In early 1950, security measures at the power station were tightened, and the power station was surrounded by a wall. A total of 150 VPs were assigned to the power station and each boiler house was guarded by one VP, All personnel employed at the power station were issued special passes. Security within the plant was at first in the hands of a MVD headquarters located in the main administrative building. Later, it was taken over by an SSD agency whose chief changed frequently in the recent years.

20/(1/12)	area, see Annex 1. The sketch was made on the basis of aerial photograps and a 1:25.000 map.
25X1A _{2.}	Chemical Combine, see Annexes 2 and 3. The plans were made after original records brought up-to-date by concordant information furnished by diffe end
25X1A 3。	Comment. For excerpts from original records on the 1950 and 1952 production
25X1A	figures, see Annex 4. For 1953 delivery quota for metals as drawn up by the State Secretariat for the Chemical Industry in December, see Annex 5.
4.	Comment. For output of the turbo generators and diagrammatic sketch showing grid connections, see Annexes 6 and 7.
25X1A 5 ∞	Comment: Probably nitrate.
	Enclosures: 7 annexes to ORR, OCD/Industrial Register, Air

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1	1915	3000	AEG	" Gleichdr.	5600	18	350	6250	1,0	5,2
. 2	1915	3000	AEG	11 11	5600	18	350	6250	1,0	5,2
3	1933	3000	AEG	Gegdr "	6000	18,2	350	6250	1,0	5,2
4	1915		Escher-*	Kond #					·	
			WyssCie.	Kond. "	8000	18	350	8000	1,0	5,2
5	1915.	1500	AEG	11 11	12500	18	350	13750	0,8	5,2
6	1938	3000	AEG	11 17	17000	18,5	350	20000	0,85	5,6
7	1917	1500	ввс	" - Ueberdr.	14000	18	350	14000	0,89	5,2
. 8	1923	3000	E WC₫	" Glei ch dr.	10000	18	340	10000	1,0	5,2
9	1928	3000	EWC*	n n	15000	18,5	350	15800	0,95	5,25
10	1929	3000	EWC*	n n	15000	18,5	350	16200	0,95	5,25
11	1929	3000	AEG	11 11	33700	18,5	400	37500	0,9	5,25
12	1935	3000	AEG	11 11	33700	18,5	400	37500	0,75	5,35
13	1936	3000	AEG	Vorschalt-Geg.Dr.	17000	90	4 80	0000	0,6	5,62
14	1937	3000	AEG	-Gleichdr.	17000	90	480	30000	0,8	5,62
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Lieferplan des ELEKTROCHEMISCHEN KOMBINATES in BITTERFELD fuer Leichtmetalle und Schwermetalle im Jahre 1953.

	-	1953	I/53	II/53	III/53	IV/53
1.	Leichtmetalle:					
	Huettenaluminium	15 910	2 685	2 475	4 790	5 9 60
	Reinstaluminium	185	7 0	22	23	70
	Aluminium-Griess	100	25	25	25	25
	Aluminium und Al-Legie- rungen aus Umschmelzung	•	1 110	1 110	1 110	1 110
	Strangpresshalbzeug aus Al-Legierungen	3 210	827	827	828	72 8
	Formguss aus Al und Al-Legierungen	1 300	325	325	325	325
	Schmiede-u.Gesenkpress- stuecke aus Al-Legierg.		7	8	7	8
	Magnesium und Mg- Legierungen	1 315	30	30	30	1 225
	Formguss aus Mg- Legierungen	7 0	15	15	15	25
2.	Schwermetalle:					
	Molybdaenmetall chem.rein	6	1,5	1,5	1,5	1,5
	Manganmetall	24	6	6	6	6
	Cereisen	7,	2 1,8	1,8	1,8	1,8
	Lagermetall (BK und BNN)	600	150	150	150	150/

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SECURITY INFORMATION

Elektrochemisches Kombinat BITTERFELD. Werk SUED

- 1. Strasse nach WOLFEN
- 2. Asussere Zoerbiger Strasse
- 5. Karlstrasse
- 4. Strasse nach LEIPZIG
- 5. STRASSE nach DESSAU
- 6. Werkeinfahrten mit Pfoertnerhaeusern
- 7. Wohnhaeuser
- 8. Haupt-Verwaltungsgebaeude
- 9. Polizei-Unterkunft. Barackenbau
- 10. Mehrere Verwaltungs-und Buerogebaeude
- 11. Feuerwehr-Unterkunft
- 12. Kleines Laboratorium fuer biologische Versuche mit Schaedlingsbekaempfungsmitteln. Frueher Laboratorium fuer Uebermikroskopie
- 13. Wissenschaftliche Laboratorien
- 14. Gebaeude der Transportbetriebe
- 15. Elektriker-Werkstatt
- 16. Material pruefstelle
- 17. Verschiedene Werkstattbetriebe
- 18. Hauptwerkstatt
- 19. Schmiede

Kraftwork

- 20. Umkleide-. Wasch-und Baderaeume
- 21. Schlosserwerkstatt des Kraftwerkes
- 22. Grubenwasser-Reinigung

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23. Wasser-Klaeranlage

SECURITY INFORMATION

- 24. Kesselhaus 1
- 25. * 2
- 26. * 3
- 27. * 4
- 28. Kessel-Speisewasser-Aufbereitung, nach dem Astznatron-Soda und dem Wofatit-Verfahren.
- 29. Hochbunker fuer Braunkohlen
- 39. Schraegbruecken fuer den Kohlentransport zu den Kesselhaeusern mit Brecheranlagen zum Zerkleinern der Rohbraunkohlen
- 31. Schornsteine
- 32. 7 holzverkleidete Kuehltuerme
- 33. Wasser-Klaerteich
- 234. Lagergebaeude
- 35. Maschinenhaus mit den Turbogeneratoren
- 56. Schaltanlagen
- 37. Schaltwarte

Aluminiumwork I

- 38. Werkstattbetriebe
- 39. Maschinen-und Transformatorenhaus
- 40. Aluminium-Elektrolyse 1
- 41. * * 2
- 42. Reinst-Aluminium-Elektrolyse
- 43. Lagergebaeude
- 44. Bueroraeume und Lehrlingswerkstatt des Eluminiumwerks
- 45. Leichtmetallschmiede, genannt Gesenkschmiede
- 46. Giesserei und Strangpressenbetrieb fuer Aluminium-Formteile.

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-3-

Kunststoff-Abteilung

47. PCU-Grundherstellung, Polymerisationsbetrieb; im Westteil Rohfabrikation

48. PCU-Tiefzieherei und Verarbeitung von Polyvinylchlorid zu Gebrauchsgegenstaenden, wie Fruehsteecksdosen usw. (im Nordteil des Berkes am Haupteingang

49. Verwaltung der Igelitbetriebe

50. Igelit-Laboratorium und Schlauch-Spritzbetrieb

- 51. PCU-Verarbeitung; in der NO-Ecke des Gebaeudes Nachlolerung von Polyvinylchlorid zu PC.
- 52. Igelit-Schuhfabrik

Organishe Abteilung

55. MAINTHAL- Organische Betriebe zur Herstellung von Chlorbenzol, Trikresyl-und Tripenylphosphat, Phosphortri-und Phosphoroxyd-chlorid. Tetrachlorkohlenstoff uam.

54. Maschinen-und Pumpenhaus

55. Verwaltung und Laboratorien der Organischen Abteilung

Anorganische Abteilung

- 56. Alter, modernisierter Phosphorofen; Erzeugung von gellen und rotem Phosphor
- 57. Herstellung von Graphit-Elektroden fuer die Elektrolyse-Betriebe. Eingebaut 25 Oefen.
- 58. Aetznatron-und Aetzkaligewinnung in SIEMENS-BILLTER-Zellen und einer neuen Quecksilber-Zellen-Anlage.
- 59. Anlage zur Herstellung von Kaliumbichromat und reinem Chromoxyd.
- 60. Laboratorien der Anorganischen Abteilung und analytisches Hauptlaboratorium

61. Gebaeuda mit Buero-und Sanitaetsraeumen

62. Aetzkalischmelze und Herstellung von Bariumchlorid

63. Garagen

64. Anlage zur Erzeugung von Generatorgas aus Braunkohlenbriketts

65. Fernsprechzentralw

66. Komplex von mehreren Gebaeuden, Salzsaeurefabrikation

67. Sogenannter Chlorat-Bau; Gewinnung von Natrium-und Kalium-Chlorat und von Rohealeium

68. Calcium-Destillation; 1947 in Betriebgesetzt

- 69. Umformerhaus mit zwei eingebauten grossen dreistufigen Gleichstrom-Umformern von je 3 x 4 000= 12 000 Amp.,einem einstufägen-von 6 000 Amp.und einigen kleineren Umformern
- 70. Auffallender, etwa 50 m hoher Turm zur Luftansaugung fler die Umformer in Pos.69

71. Kalk-Brennofen

72. Gewinnung von Titansioxyd; frueher Pottaschefabrikation, deren Anlagen demontiert wurden.

73. Herstellung von Magnetit-Elektroden fuer die Erzeugung von Galciumchlorat

- 74. Schuppen, enthaltend eine im Kriege nicht fertiggestellte Griesogen-Anlage zur Sauerstoff-Speicherung
- 75. Phosphosagglomeration

SECRET CONTROL

76. Erzeugung von Kaliumpermanganat

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77. Erzeugung von Oxalsaeure

noch Leg. zu Anl. 2

. 4 -

Stickstoff-Abteilung

78. Grosser, tubenfoermiger Behaelter, etwa 1000 m fassend, zur Speicherung von LEUNA-Ammoniak fuer die Salpetersaeure fabrik

79. Ammoniak- Verbrennungsanlage

80. Adsorptionstuerme fuer Salpetersaeure

81. Weiterverarbeitung von Salpetersæure zu Ammonsalpeter (Ammoniumnutrat)

\$2. Erzeugung von Kalkammensalpeter

55. Lagerschuppen fuer Kalkammonsalpeter

84. Lagerschuppen und mechanische Abpackerei von Ammonium itrat

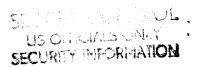
Sonstige Gebacude

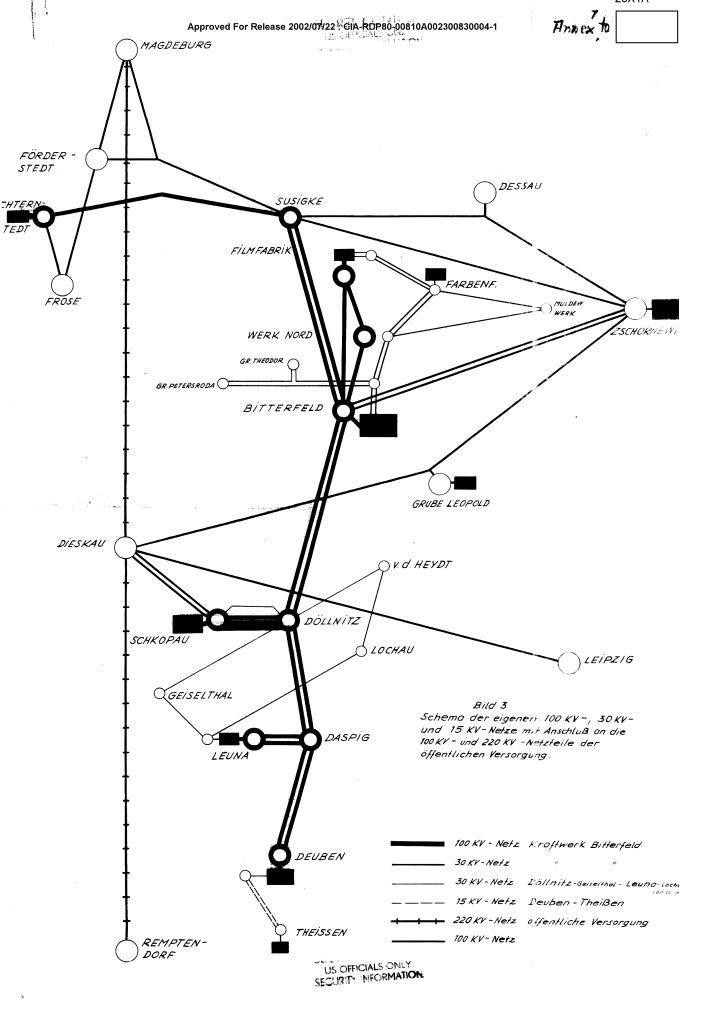
85. Bandanlage fuer Versuche zum Bestrich von Papier mit ICU

86. Barackenbau. Versuchsanlage mit Hochfrequenzschwingungen 87. Zeitweilig lagerung von Aluminium-Schrott

88. Aeltere LINDE-Anlage zur Erzeugung von Sauerstoff und Stickstoff, die auf Flaschen gefuellt werden.

89. Gebaeudereste von demontierten Anlagen.





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Produktions-und Planzahlen des ELEKTROCHEMISCHEN KOMBINATS in BITTERFELD in den Jahren 1950 und 1952.

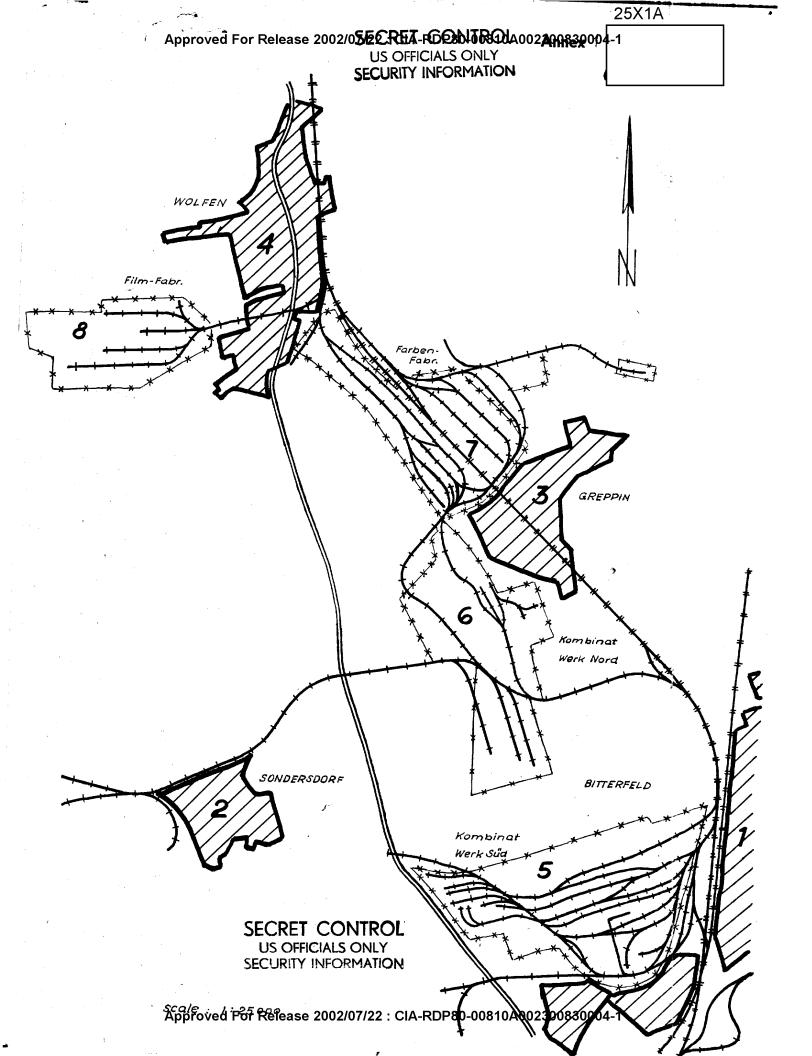
		ng 1950		splan1952
Erzeugnisse	Gesamt		Gesamt	Waren
Anorganische Produkte (t)		Virtual		
Aetznatron-Lauge	4 8 000	28 216	61 400	39 600
Aetznatton fest, tech.	_	_	7 200	3 600
Aetznatron fest, chlorarm	_	_	1 650	1 650
Aetzkali-Lauge	1 5 800	1 860	26 000	3 600
Aetzkali fest		-	4 800	4 784
Aetzkali fest, chlorarm	-	- ·	1 200	1 200
Kalium-u.Natriumchlorat	13 505	13 505	18 000	1 7 98 8
Kaliumbichromat	_	_	4 800	3 400
Pottasche	-	•••	12 000	11 700
Kaliumpermanganat	1 610	1 610	2 700	2 700
Natronbleichlauge	-	_	5 000	4 650
Chlor fluessig	16 685	14 120	18 000	10 1 5 0
Chalorcalcium-Lauge	6 790	2 033	4 000	3 200
Chlorcalcium-Pulver	-	_	7 00	650
Chlorkalk	-	-	3 500	5 500
Salzsaeure I	51 600	26 210	64 400	26 8 0 0
ii II	` -		15 600	13 200
Phosphor gelb, roh	1 350	-	1 355	-
" rein	-	_	1 350	73 0
t rot	•	-	30	30
Bariumchlorid	1 215	1 080	1 080	840
Bariumcarbonat	- '		2 000	1 520
Chromsaeure	35	35	• 400	400
Chromoxyd	-	-	30	30
Basochrom		-	960	960
Borsaeure	24	24	24	24
Graphitelektroden f.chem. Ind.			3 900	1 100
f.metall.Ind.	-		9 600	9 600
Phosphortrichlorid roh	-	-	2, 445	-00
rein	-	-	100	80
Phosphoroxydchlorid		-	2 600	1 885
Schwefel in Brocken	_		1 900	26 320
Siliron u.Trosilon	-	470	26 400	1 170
Titandioxyd	517	43 0	1 320	920
Saeurekitte	1 023	935	1 000 1 2260	6 0
Sauerstoff, verdichtet (1000 m ³)		-	120	108
Stickstoff " "	•••	-	120	100
Stickstoffprodukte (t)	, t		60 7 00	
Rohsalpetersaeure	18 020		20 780	E 000
Ammonsalpeter techn.	9 210		5 800	5 800
Kalkammosalpeter	134 890	134 890	167 550	167 550
Natriumnitrit-Nitratlauge	-	_	2 570	2 470
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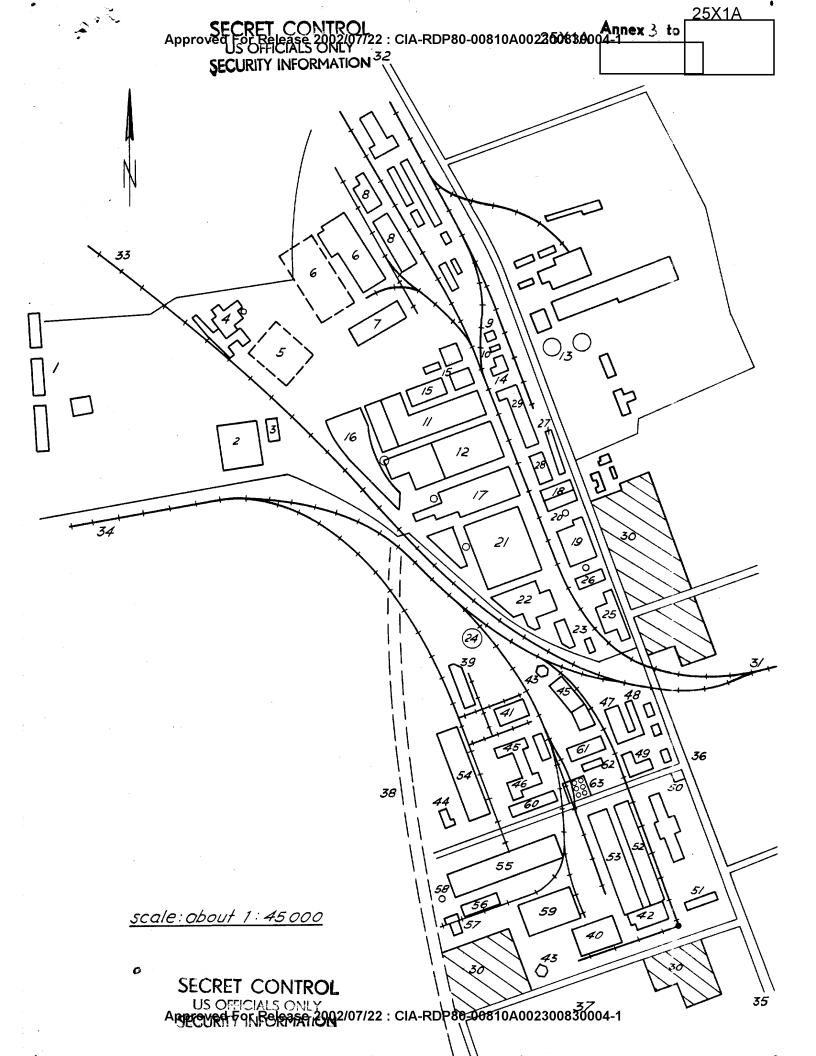
		SECURITY IN	OKMATION	
Organische Produkte (t)				
Chlorbenzol	-	-	3 600	940
o-Diochlorbenzol	-		285	285
p- "	-		500	500
Benzotrichlorid roh	632	_	520	_
" rein	_	_	465	_
Benzyl-Benzalchlorid	<u>.</u>	_	150	150
Benzoesaeure	160	160	240	240
Trikresylphosphat	2 980	1 490	4800	3 600
Triphenylphosphat	_		180	180
Tetrachlorkohlenstoff	3 720	3 670	5 100	4 800
Gesarol	_	_	2 960	2 850
Chloral rein	695	310	1 850	370
Hexaprodukte	_	_	4 500	4 500
Oxalsaeure krist.	1 710	1 650	1 800	1 750
Ameisensaeure		1 000	1 000	1 000
Calciumformiat	_		1 920	-
Methylenchlorid	_	_	100	_
me only remonitority	_		100	_
Kunststoffe u.Kunststofferzeugniss	a(+)			
Igelit PCU	4 690	1 690	6 000	2 400
" PC	± 050	1 090	1 200	1 085
Vinidur-Halbzeug	605	3 4 5	1 400	750
Igelit-Weichhalbzeug	3 415	2 200	4 000	2 700
Type the demonstration of the second of the	0 410		960	960
Fussbodenbelag (1000 m ²)	-	-	440	340
Stammloesung fuer Lacke	-	_	#40	240
Toightmotollo u Tagiamungan(t)				
Leichtmetalle u.Legierungen(t)	68	68	15 000	5 900
Huettenaluminium in Masseln I	00	• 00	2 185	2 185
i II	_	-	2 000	2 000
Aluminium-Formstuecke	-	-		270
Reinstaluminium	45	-	270	
Aluminiumgriess	- 7 017	0 175	500	500
Masseln aus Aluminiumschrötte	3 213	2 115	5 400	1 400
Aluminium-Strangpresshalbzeug	3 410	1 290	4 500	3 860
Formstuecke aus Aluminium-Legierg.	-	-	6 750	-
Gesenk-Pressprodukte	-		100	40
Aluminium-Formguss	1 080	1 040	3 500	3 480
Masseln aus Magnesium-Legierungen	_	-	200	200
Formguss aus Magnesium-Legierungen	135	135	24	24
2.15 /10				
Sonstige Produkte (t)	m o	n = 7	140	140
Aufschweisslegierungen	78 495	75,3	140	140
Stahlformguss	625	620	263	240
Magnetlegierungen	-	-	180	180
Calciumaluminium _	-	-	30	30
Lagermetall eign. Erzeugung		-	120	120
" Umarbeitung		-	360	360
Molybdaen, chem.rein			6	6
Wolframsaeure	13	13	30 30	30
Hormit			3 8	38
Hormin	-	-	360	360
Strom (Millionen kWh)	_		1 370	260 5 % 0
Dampf (1000 t) SECRET CONT	ROŁ	-	9 300	5 3 0
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SECURITY INFORMATION	5X1A	

- 1. Stadtgebiet BITTERFELD
- 2. Ortschaft SONDERSDORF
- 3. Ortschaft GREPPIN
- 4. Stadtgebiet WOLFEN
- 5. Elektrochemisches Kombinat BITTERFELD Werk SUED, VEB
- 6. " Werk NORD, VEB
- 7. Farbenfabrik WOLFEN, VEB
- 8. Filmfabrik AGFA der SAG FOTOPLENKA, WOLFEN.



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Elektrochemisches Kombinat BITTERFELD, Werk NORD

- 1. BINO-Suppenwuerze-Betrieb; mehrere Gebaeude
- 2. 100-kV- Transformatoren-Station
- 5. 30 -kV- Transformatoren-Station
- 4. Seilbahnantrieb und Aufenthaltsgebaeude
- 5. Grundmauern der chemaligen Metallhuette
- 6. Astznatron-Elektrolyse; Westbau -Grundmauern der demontiorten Quecksilber-Anlage
- 7. Kesselhaus
- 8. Erzeugung von Calciumchlorid.Frueher Calcium-Hypochlorid-nlage. die demontiert wurde
- 9. Molybdaenreduktion; eingebaut 6 bis 7 kleine Drehrohroefon, in denen Molybdaensaeure zu Molybdaen reduziert wird.
- 10. Natrium-Elektrolyse-Gewinnung von metallischem Natrium
- 11. Aetznatron-Elektrolyse, im Westteil des Gebaeudes-Maschinenhaus 12. Im Westbau Loeserei und Eindampferei von Aetznatron; im Detteil werden Siliron und Trosilin als Wasch-und Reinigungemittel her-
- 13. 2 Gasometer fuer je etwa 10 000 m3 Wasserstoff
- 14. Betriebsleitung und Laboratorien fuer die Schwermetallbetriebe
- 15. Chlorkalkbetrieb
- 16. Groesserer, langgestreckter Bau des Schwermetallbetrieben in dem vor allem Wolframsaeure und Molybdaen gewonnen werden.
- 17. Erzeugung von Ammonium-p-Wolframat als Kontaktstoff fuer das LEUNA-Wark
- 18. Elektrolyse von Calcium-und Cer-Mischmetallen
- 19. Edelstein-Synthesebetrieb
- 20. Sauerstoff-Gasometer fuer dence delsteinbetrieb
- 21. Oxalsacurekristallisation und Ameisensacure-Erzeuging
- 22. Ehemaliger Verwaltungsbau; jetzt Laboratorium fuer die-organischen Betriebe
- 23. Sauerstoff, Erzeugung
- 24. Gasometer fuer Wasserstoff, etwa 1 000 m Fassungsver oegen
- 25. Speiseraum III
- 26. Elektrikerwerkstatt
- 27. Speiseraum II
- 28. Verwaltungsgebaeude
- 29. Schlosserwerkstatt
- 30. Wohngebasude
- 31. Eisenbahngleise nach BITTERFEID
- 32. Strasse nach WOLFEN und DESSAU
- 53, Anschlussgleis zur Grubenbahn
- 34. Nebenbahn nach ZCERBIG
- 35. Strasse nach BITTERFELD und zum Werk SWED
- 36. Paesevalstrasse
- 37. Gertrudstrasse 38. Landwehrkanal

Aluminiumwerk II 39. Freiluft-Transformatoren

US OFFICIALS ONLY 40. 100- kV-Freiluft-Transformatoren Approved For Release 2002/07/22 : CIA-RDP80-008ECARDP80P80P80PA10

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41. Gleichrichtergebaeude 42. Gleichrichtergebaeude fuer die Ofenhaeuser 1 und 2 43. Kushltuerme aus Holz 44. Pumpenhaus zur Wasserversorgung des Werkes 45. Lagergebaeude 46. Werkstastten 47. Magazin 48. Garagen 49. Verwaltungsgebaeude 50. Einfahrt und Pfoertnerhaus 51. Laboratorium 52. Ofenhaus 1 mit Tonerdelager im N-Teil 53. 54. 55. 56. 57. Aufbereitungsanlage 58. Schornstein 59. Giesserei 60. Masselfabrik 61. Ofenbogenfabrikation und Nippelsteingiesserei 62. Nippelsteingiesserei

63. Siloanlage